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ABSTRACT

Described is the deaf student population (n=171) at California State University, Northridge for the Fall semester of 1976. Statistical data is presented for the following variables: age and sex, audiometric data, other handicapping conditions, age of onset, residence by place of birth and place of high school graduation, type of high school background, previous postsecondary experience, Scholastic Aptitude Test and Graduate Record Examination scores, class standing, number of units carried, enrollment in classes, service in classes, and comparison of majors of hearing and deaf students. Results are summarized, including that one-third of the students graduated from a residential school for the deaf while two thirds graduated from day schools, day classes, or regular high schools; that most students have had a previous postsecondary experience before coming to the university; and that there was an overwhelming preference by deaf students for a career in education. (SBH)

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A Profile of CSUN Deaf Students

Fall Semester, 1976

by

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The purpose of this publication is to describe the deaf student population at California State University, Northridge (CSUN). For the Fall semester of 1976, 171 deaf students registered through Campus Services for the Deaf. Campus Services for the Deaf, a unit of the Center on Deafness at CSUN, processes admissions applications of deaf applicants, conducts a registration and orientation for deaf students, and delivers such "support services" as interpreting, counseling, notetaking, tutoring, and aural rehabilitation.

The program at CSUN follows the "integrated" model of postsecondary education for deaf individuals whereby deaf students take their classes alongside hearing students. Regular university instructors have their lectures translated into sign language by an interpreter, and/or a notetaker takes notes for the deaf student. In addition to the interpreting and notetaking services, Campus Services for the Deaf provides personal, academic, and career counseling from counselors trained in working with deaf persons, tutoring in any curriculum area, and aural rehabilitation services.

What are the characteristics of those deaf college students who choose to pursue liberal arts studies in the company of hearing students rather than in an institution where they share the college experience only with other deaf students? This question is of interest to the field in general, and more specifically to deaf students, their rehabilitation and school counselors, educators, and parents as personal decisions about the choice of a college are considered.

CSUN is a large liberal arts university in suburban Los Angeles (formerly known as San Fernando Valley State College). For the Fall

semester of 1976, 171 deaf students were included in the total university enrollment of 26,981. The university awards bachelor's and master's degrees, but does not award doctorates. As of September 1, 1976, 47 deaf persons had earned bachelor's degrees and 198 deaf students had earned 202 master's degrees (four students earned two master's degrees each).

Variables Under Consideration

The profile variables noted in this report fall into two categories: (1) data collected prior to registration, and (2) data gathered after registration.

In the first category are these variables:

1. Age and Sex
2. Audiometric Data
3. Other Handicapping Conditions
4. Age of Onset
5. Residence by Place of Birth and Place of High School Graduation
6. Type of High School Background
7. Previous Postsecondary Experience
8. SAT/GRE Scores
9. Class Standing

In the second category are these variables:

10. Number of Units Carried
11. Enrollment in Classes
12. Service in Classes
13. Comparison of Majors of Hearing and Deaf Students

Source of Data

The information reported herein was gathered by the Student Personnel Services section of Campus Services for the Deaf during the period September 1 - December 1, 1976, and was derived from the following sources:

- admissions forms
- registration data
- delivery of services data
- audiograms
- transcripts
- test scores
- interviews

Profile Variable 1. Age and Sex

The deaf student population, of whom 85 were male and 86 were female, ranged in age from 16 to 81, with the mean age for all 171 registrants being 25.5 years (mode age = 22). The mean for undergraduate students was 23 years; the mean for graduate students was 31 years.

Two 16-year-old females met the university criteria for admission at that early age while an 81-year-old male, having earned a bachelor's degree in psychology in 1975, registered for a graduate course in counseling for Fall, 1976.

It would appear that this population of 171 deaf students is a somewhat older group than is found in most college situations.

Profile Variable 2. Audiometric Data

At the time of the writing of this report (December 1976), 135 current audiograms (79% of the 171 registrants) were available for analysis and inclusion within this report.

If a student failed to respond at a given frequency, data were coded for statistical purposes in this way: 250 Hz = 90 dB; 500, 1,000, 2,000, 4,000 Hz = 110 dB. In other words, a "no response" was recorded as maximum intensity at all frequencies.

Table 1 gives audiometric data for each ear, left ear average (LEA), right ear average (REA), and better ear average (BEA).

Table 1. Audiometric Data

Hz	Left Ear	Right Ear
250	70.1	69.1
500	82.5	81.6
1000	92.1	91.5
2000	96.0	95.4
4000	98.3	97.7

LEA	90.2
REA	89.5
BEA	86.9

As can be seen from the data displayed in Table 1, the deaf registrants of Campus Services for the Deaf at CSUN may be described audiometrically as a profoundly deaf group (Furth, 1973).

In previous studies (Murphy, 1976a, 1976b) conducted among the same population at CSUN it was found that there was no correlation between degree of hearing loss and academic achievement, leading to the conclusion that deaf students do as well academically as do hard-of-hearing students. It was also found that the deaf students as a group achieved at about the same rate as the hearing students on campus.

Profile Variable 3. Other Handicapping Conditions

Among the 171 registrants were 16 who self-reported a secondary handicap in addition to their deafness. Table 2 gives the conditions.

Table 2. Other Handicapping Conditions

Other Handicap	N
Vision	4*
Cerebral Palsy	7
Facial Paralysis	2
Orthopedic Involvement	3
	16

*In addition to a vision problem, one student also reported an orthopedic handicap.

As can be seen from the data given above, 16 of 171 students, or about 10% of all deaf registrants, report a secondary handicap.

Profile Variable 4. Age of Onset

Students self-report age of onset of hearing loss at the time they first apply to the university. Table 3 gives this information.

Table 3. Age of Onset

Age	N
Birth - 2 years	100
3 - 7 years	24
8 - 15 years -	6
16+ years	9
Unknown or Not Reported	32
	171

As can be seen from Table 3, 72% of those reporting age of onset (100 of 139) indicated prelingual deafness (birth - 2 years).

Profile Variable 5. Residence

Ours is a highly mobile society and deaf people, like all Americans, move around a great deal. The program at CSUN serves deaf students from across the nation, and from several foreign countries. The fact that the deaf student body is drawn from so many different states is strong justification for CSUN to seek federal, rather than just state, funding to support the program. In fact, Campus Services for the Deaf receives funding from a combination of federal and state sources.

Since people move so much it was necessary to look at the residence variable in several different ways. For example, many graduate students come to CSUN immediately after finishing a bachelor's degree at Gallaudet College in Washington, D.C. If residence was assumed to mean one's last address before attending CSUN, a disproportionate number of students would appear as "residents" of the District of Columbia which of course, they are not.

Another consideration is that an individual can declare California as one's "legal residence" after having resided in the state for one year. Many students, deaf and hearing alike, do so to escape a higher tuition charge for residents of states other than California, regardless of whether or not they actually intend to remain in the state after graduation.

In order to give a more accurate picture of geographical representation, two considerations were used: (1) place of birth, and (2) state of high school graduation.

Table 4 shows that deaf students were born in 36 different states, the District of Columbia, and 6 foreign countries, and graduated from high school in 32 states, the District of Columbia, and 3 foreign countries.

Table 4. Place of Birth and Place of High School Graduation

	Place of Birth	Place of High School Graduation
Alabama	1	0
Alaska	1	2
Arizona	2	4
Arkansas	0	0
California	55 (32%)	86 (50%)
Colorado	2	2
Connecticut	3	4
Delaware	0	1
Florida	1	0

	Place of Birth	Place of High School Graduation
Georgia	3	1
Hawaii	4	4
Idaho	1	1
Illinois	10	8
Indiana	1	2
Iowa	1	0
Kansas	2	1
Kentucky	1	1
Louisiana	0	0
Maine	0	0
Maryland	0	0
Massachusetts	9	2
Michigan	6	3
Minnesota	5	3
Mississippi	0	0
Missouri	3	2
Montana	0	1
Nebraska	1	1
Nevada	0	0
New Hampshire	0	0
New Jersey	1	1
New Mexico	0	0
New York	7	5
North Carolina	1	0

	Place of Birth	Place of High School Graduation
North Dakota	1	0
Ohio	6	3
Oklahoma	2	2
Oregon	2	2
Pennsylvania	3	2
Rhode Island	0	0
South Carolina	2	1
South Dakota	1	1
Tennessee	2	3
Texas	5	5
Utah	5	1
Vermont	0	0
Virginia	3	2
Washington	7	7
West Virginia	0	0
Wisconsin	1	0
Wyoming	0	0
Washington, D.C.	1	2
Other Countries:		
Belgium	1	0
Canada	4	3
Fiji Islands	1	0
Japan	1	1

	Place of Birth	Place of High School Graduation
Netherlands	1	0
Poland	1	1
	171	171

As might be expected, a high percentage of students were born in (32%) and/or graduated from high school (50%) in California. It seems natural that deaf Californians would want to attend college close to home, but another explanation for the higher percentage of Californians is that Campus Services for the Deaf has conducted a systematic and comprehensive recruiting campaign for the past five years among high school programs for deaf students within the state.

Profile Variable 6. Type of High School Background

A simple differentiation of high school programs is: residential, and other-than-residential. In the latter category are day schools and day classes with educational programs and/or support services for the deaf. Also included here are "regular" high schools which deaf students may have attended which had neither a special program nor support services.

Table 5. Type of High School

Type	
Residential	56 (33%)
Other-Than-Residential	115 (67%)
	171 (100%)

A further breakdown shows that 35 undergraduate students, and 21 graduate students graduated from a residential school for the deaf whereas 88 undergraduate and 27 graduate students graduated from an other-than-residential school.

Students graduating from a residential school were not interviewed to determine if they actually resided at the school or if they were day pupils there. Nor were interviews conducted among the other-than-residential group to determine the exact nature of their high school experience, so no conclusions can be drawn at this time on these issues. The only conclusion to be drawn at this time is that about 1/3 of the CSUN deaf population graduated from a residential high school for the deaf.

Profile Variable 7. Previous Postsecondary Experience

With the number of postsecondary programs for deaf students increasing steadily it is becoming common for students to come to CSUN after an earlier postsecondary experience elsewhere. In fact, Table 6 shows that "transferring" to CSUN is the rule, rather than the exception.

Table 6. Previous Postsecondary Experience

Undergraduates Transferring Directly From	N	Graduates BA Earned From	N
Gallaudet	18	Gallaudet	29
NTID/RIT	10	NTID/RIT	0
28 Postsecondary Institutions	51*	CSUN	11
High School	44	8 Other Colleges	8
	123		48**

*While these 51 students transferred directly from 28 different institutions, they had in fact attended 56 different institutions in all. It is not uncommon for a deaf student to have had two or more college experiences prior to coming to CSUN.

**Three of the 48 also had earned a first master's degree, earned at the University of Arizona, Butler University, and CSUN, respectively.

Table 6 shows that 64% of undergraduate students have had a previous postsecondary experience, and that 77% of the graduate students earned their undergraduate degree at an institution other than CSUN.

Profile Variable 8. SAT/GRE Scores

It is a requirement of the California State University and College System that undergraduate students with less than 56 transferable

semester units or 84 transferable quarterly units must submit Scholastic Aptitude Test (SAT) scores or American College Test (ACT) scores. The SAT is most frequently taken.

A total of 72 deaf undergraduate students took the SAT prior to admission to CSUN. The mean Verbal score was 337. The mean Quantitative score was 385.

A recent Newsweek article (March 8, 1976) reported new national norms for takers of the SAT. These national norms are: Verbal = 434; Quantative = 472. Hence, the data show that CSUN students score about 100 points below national norms on both subtests. This is about one full standard deviation (SD = 100) below the mean.

Applicants for graduate level study at CSUN are required to take the Aptitude Test of the Graduate Record Examination (GRE). This requirement is waived for those whose undergraduate grade point average is above 3.0.

Fourteen deaf students submitted GRE scores of: Verbal = 336; Quantitative = 407. The national GRE norms, as reported by the Educational Testing Service, are: Verbal = 494; Quantitative = 510. Hence, the data show that deaf graduate students fall about 1-1/4 standard deviations (SD = 126) below the mean on the Verbal subtest, and about 3/4 of a standard deviation (SD = 136) below the mean of the Quantitative subtest.

Profile Variable 9. Class Standing

CSUN defines class standing (freshman, sophomore, etc.) by the number of semester units completed.

Table 7. CSUN Criteria for Class Standing

Class Standing	Units Completed
Freshmen	0 - 29
Sophomores	30 - 59
Juniors	60 - 89
Seniors	90+

Graduate students are defined as those who possess a bachelor's degree and who have been accepted for graduate study by a department of the university and by the Office of Graduate Studies.

Table 8. Class Standing, CSUN Deaf Students

Class Standing	N	
Freshmen	31	(18.1%)
Sophomores	21	(12.3%)
Juniors	45	(26.3%)
Seniors	26	(15.2%)
Graduate	48	(28.1%)
	171	(100.0%)

Fifty-one students registered at CSUN for the first time in September, 1976 as freshmen or transfer students; 120 students had been previously registered at the university.

Profile Variable 10. Number of Units Carried

CSUN operates on a semester (as opposed to a quarterly) unit basis. Students carrying 12 or more units are considered full-time students.

The mean number of semester units carried was 12.3, with a range of 3 - 23; 123 deaf students carried 12 or more units while 48 students carried less than 12 units.

Profile Variable 11. Enrollment in Classes

Approximately 4,500 different class sections were offered by CSUN during the Fall, 1976 semester. Deaf students were enrolled in 463 of these classes, or about 10% of all classes offered. When one realizes that deaf students constitute only a little more than 1/2 of 1% of the student body and yet enroll in about 10% of all classes, it can be seen that the degree of integration is very high.

In fact, if one realizes that there may be on the average about 20 hearing students in every class where deaf students are enrolled, then more than 9,000 hearing students shared the college academic experience with one or more deaf students during the Fall semester of 1976.

Profile Variable 12. Service in Classes

Once a deaf student registers for a class, he is invited by Campus Services for the Deaf to select the service he feels he needs to assure his academic success.

Interpreters are paid employees who are assigned to classes as requested by the deaf students. They translate the spoken word of the professor into sign language and "reverse-interpret" the signs of a deaf person into spoken language when a deaf person wishes to participate in

class. If a deaf person receives the services of a paid interpreter (the hourly pay rate for interpreters ranges from $3.50 - $8.50), he is asked to recruit a volunteer notetaker from among other class members. Generally, this person takes notes on a spirit master ditto, or places carbon paper in a notebook to make duplicate notes. Interpreters cover usual college lectures and some off-campus university-sponsored activities. In one instance, a deaf student in a health science class was assigned to observe the busy emergency room of a major hospital between the hours of midnight and 5:00 A.M. A paid interpreter served the situation.

Notetaker/Interpreters are paid employees (at $3.00 per hour) whose first responsibility is to take good notes, and secondly, to interpret some things to a student. Notetaker/Interpreters are usually currently enrolled in interpreting classes. As their skills increase, they are promoted to Interpreter.

Notetakers are paid employees (at $2.60 and $3.00 per hour) whose only responsibility is to take good notes. Generally, notetakers are currently enrolled in sign language classes and they hope in time to become Notetaker/Interpreters and later, Interpreters.

Some deaf students are enrolled in classes where No Service is supplied. "No Service" classes typically are "activity" courses such as physical education, laboratories, or art courses, where demonstrations and clear-cut directions are given. This "No Service" choice represents a voluntary decision on the part of a deaf student to decline service. Each semester, students complete a form requesting a service

(interpreting, notetaking) or No Service at all. Service is provided in 100% of all cases where requested.

Table 9. Assignment of Service

Service	Number of Classes
Interpreters	214
Notetaker/Interpreters	68
Notetakers	87
No Service	94
	463

As can be seen from Table 9, some form of interpreting is supplied in 282 classes or 76% (282 of 369 classes) of classes where paid service is provided to deaf students.

Profile Variable 13. Comparison of Majors of Hearing and Deaf Students

According to the official CSUN Catalog for 1976-77, the university has 50 academic departments which are grouped under eight different schools. They are:

1. School of the Arts. Departments: Art General Studies, Art History, Art Three-Dimensional Media, Art Two-Dimensional Media, Music, and Theatre.

2. School of Business Administration and Economics. Departments: Accounting, Business Law, Economics, Finance, Real Estate and Insurance, Management, Management Science, Marketing, Office Administration and Business Education.

3. School of Communication and Professional Studies. Departments: Child Development, Communicative Disorders, Health Science, Home Economics, Journalism, Physical Education, Radio-Television-Film, Recreation and Leisure Studies, and Speech Communication.

4. School of Education. Departments: Administration and Supervision and Higher Education, Educational Psychology, Elementary Education, Secondary Education, Social and Philosophical Foundations, and Special Education.

5. School of Engineering and Computer Science. Departments: Computer Science, Electrical and Electronics Engineering, Mechanics and Materials, and Thermal-Fluid Systems.

6. School of Humanities. Departments: Chicano Studies, English, Foreign Languages and Literatures, Philosophy, and Religious Studies.

7. School of Science and Mathematics. Departments: Biology, Chemistry, Geosciences, Mathematics, Physics, and Astronomy.

8. School of Social and Behavioral Sciences. Departments: Anthropology, Geography, History, Pan African Studies, Political Science, Psychology, and Sociology.

Majors of deaf and hearing students registered for the Fall, 1976 semester were grouped under eight schools. Another category is "Special Major," a separate designation for programs which cross several schools and which students propose to departments as highly individualized courses of study. Also, many students simply state "undecided" as a choice.

Table 10. Comparison of the Majors of Deaf Students and Hearing Students

School	Hearing Students		Deaf Students	
	% Under-Graduate	% Graduate	% Under-Graduate	% Graduate
Arts	9	5	10	2
Business	20	8	8	2
Communication	19	12	17	0
Education	*	19	*	68
Engineering	5	3	4	0
Humanities	10	3	17	2
Science/Math	7	4	8	2
Social/Behavioral	16	8	12	2
Special Major	1	1	0	0
Undecided	13	37	24	22

*By California law, a student may major in Education only at the graduate level.

As can be seen from Table 10, the percentages differ most markedly with the School of Business where 20% of hearing undergraduates and 8% of hearing graduate students pursue a major vs. only 8% of deaf undergraduates and 2% of deaf graduate students; the School of Communication and Professional Studies where there are no deaf graduate students vs. 12% of the hearing graduate students, the School of Education where 68% of deaf graduates major vs. only 19% of the graduate hearing population, and the School of Social and Behavioral Sciences at the graduate level where 8% of hearing students major but only 2% of deaf students do so.

These findings are probably best explained by the career opportunities which deaf people may expect (or may not expect) upon completion of a major. A look at the undergraduate percentages shows that deaf persons anticipate career opportunities (or preparatory training in anticipation of earning a master's degree) in the School of Arts, Communication and Professional Studies, Engineering and Computer Science, Humanities, Science and Mathematics, and Social and Behavioral Sciences.

A look at the graduate percentages shows an overwhelming preference for a career in education. This may be explained, in part, by the fact that CSUN has an outstanding reputation for its teacher preparation program in the area of deafness.

SUMMARY

1. A total of 171 deaf students registered with Campus Services for the Deaf for the Fall, 1976 semester of whom 85 were male and 86 were female. The age range was 16 - 81. The mean for undergraduate students was 23 years; the mean for graduate students was 31 years.
2. The population may be described audiometrically as a profoundly deaf group.
3. Sixteen students (10% of the population) self-reported other handicapping conditions including vision, cerebral palsy, facial paralysis, and orthopedic involvements.
4. Prelingual deafness was indicated by 72% of those (100 of 139) reporting age of onset of hearing loss.
5. Deaf students were born in 36 different states, the District of Columbia, and 6 foreign countries, and graduated from high school in 32 states, the District of Columbia, and 3 foreign countries.
6. One-third of the students graduated from a residential school for the deaf; two-thirds graduated from day schools, day classes, or "regular" high schools.
7. Most students have had a previous postsecondary experience before coming to CSUN: 44% of undergraduate students transferred to CSUN after attendance elsewhere, and 77% of the graduate students earned their undergraduate degree at an institution other than CSUN.
8. The deaf undergraduates had SAT means of: Verbal = 337, Quantitative = 385 (vs. national norms of 434 and 472 respectively), and GRE means of: Verbal = 336, Quantitative = 407 (vs. national norms of 494 and 510, respectively).

9. Class standing was as follows: Freshmen, 18.1%; Sophomores, 12.3%; Juniors, 26.3%; Seniors, 15.2%, and Graduate Students, 28.1%.

10. The mean number of semester units carried was 12.3, with a range of 3 - 23; 123 students carried 12 or more units while 48 students carried less than 12 units.

11. Deaf students enrolled in 463 classes (about 10% of all classes offered by the university) and about 9,000 hearing students shared the college academic experience with one or more deaf students during the Fall semester of 1976.

12. Interpreters or Notetaker/Interpreters served 282 classes or 76% of all classes where service was requested; notetakers served 87 classes, and in 94 classes, deaf students voluntarily elected "No Service."

13. The majors of deaf students were compared with the majors of hearing students. Twenty percent of hearing undergraduates and 8% of hearing graduates majored in the School of Business vs. only 8% of deaf undergraduates and 2% of deaf graduates. Twelve percent of hearing graduate students majored in the School of Communication and Professional Studies vs. no deaf graduates (though they registered in about equal proportions as undergraduate students in the same school). Sixty-eight percent of deaf graduate students majored in the School of Education vs. only 19% of the graduate hearing population. Eight percent of graduate hearing students majored in the School of Social and Behavioral Sciences vs. only 2% of deaf graduate students. The proportion of hearing and deaf students in all other schools is approximately the same.

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